

Okavango tilapia (*Tilapia ruweti*)

Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, May 2012
Revised, June 2015



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1 Native Range, and Status in the United States

Native Range

From Froese and Pauly (2012):

“Africa: swampy high plateaus of the Congo-Zambezi watershed [Teugels and Thys van den Audenaerde 1991], including the Lufira River [Poll and Thys van den Audenaerde 1965]. Also known from the Okavango delta [Skelton 1993]. Reported from Zimbabwe [Bell-Cross and Minshull 1988].”

Status in the United States

This species has not been reported as established in the U.S.

Means of Introductions in the United States

This species has not been reported as established in the U.S.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

From ITIS (2012):

“Kingdom Animalia
Phylum Chordata
Subphylum Vertebrata
Superclass Osteichthyes
Class Actinopterygii
Subclass Neopterygii
Infraclass Teleostei
Superorder Acanthopterygii
Order Perciformes
Superfamily Labroidei
Family Cichlidae
Genus *Tilapia*- Smith, 1840
Species *Tilapia ruweti*- Poll and Thys van den Audenaerde, 1965”

“Taxonomic status: valid”

Size, Weight, and Age Range

From Froese and Pauly (2012):

“Max length : 10.4 cm TL male/unsexed; [Teugels and Thys van den Audenaerde 1991].”

Environment

From Froese and Pauly (2012):

“Freshwater; benthopelagic”

Climate/Range

From Froese and Pauly (2012):

“Tropical; 10°S - 21°S”

Distribution Outside the United States

Native

From Froese and Pauly (2012):

“Africa: swampy high plateaus of the Congo-Zambezi watershed [Teugels and Thys van den Audenaerde 1991], including the Lufira River [Poll and Thys van den Audenaerde 1965]. Also known from the Okavango delta [Skelton 1993]. Reported from Zimbabwe [Bell-Cross and Minshull 1988].”

Introduced

No established populations of this species have been reported outside its native range.

Short description

No information available.

Biology

From Froese and Pauly (2012):

“Occurs in swamps and floodplain habitats, especially enriched pans and well-vegetated shallow littoral margins of drainage rivers. Feeds on detritus, soft plants and insect larvae. Males establish a territory and attract a ripe female to form a pair bond. Females construct a saucer-shaped nest in which eggs are laid and fertilized then tended mainly by the female while the male guards the territory (Skelton 1993).”

Human uses

From Froese and Pauly (2012):

“Aquarium: commercial.”

Diseases

There are no OIE-notifiable diseases reported for this species.

Threat to humans

From Froese and Pauly (2012):

“Harmless.”

3 Impacts of Introductions

No introductions of this species have been reported.

4 Global Distribution



Figure 1. Known global distribution of *T. ruweti*. Map from GBIF (2015).

5 Distribution within the United States

No currently known distribution within the United States.

6 Climate Matching

Summary of Climate Matching Analysis

The climate match (Sanders et al. 2014; 16 climate variables; Euclidean Distance) was low throughout much of the United States with the Southwest exhibiting some medium and high scores. Climate 6 match indicated that the Continental U.S. has a medium climate match. The range for a medium climate match is 0.005 to 0.103. The climate match of *T. ruweti* is 0.049.

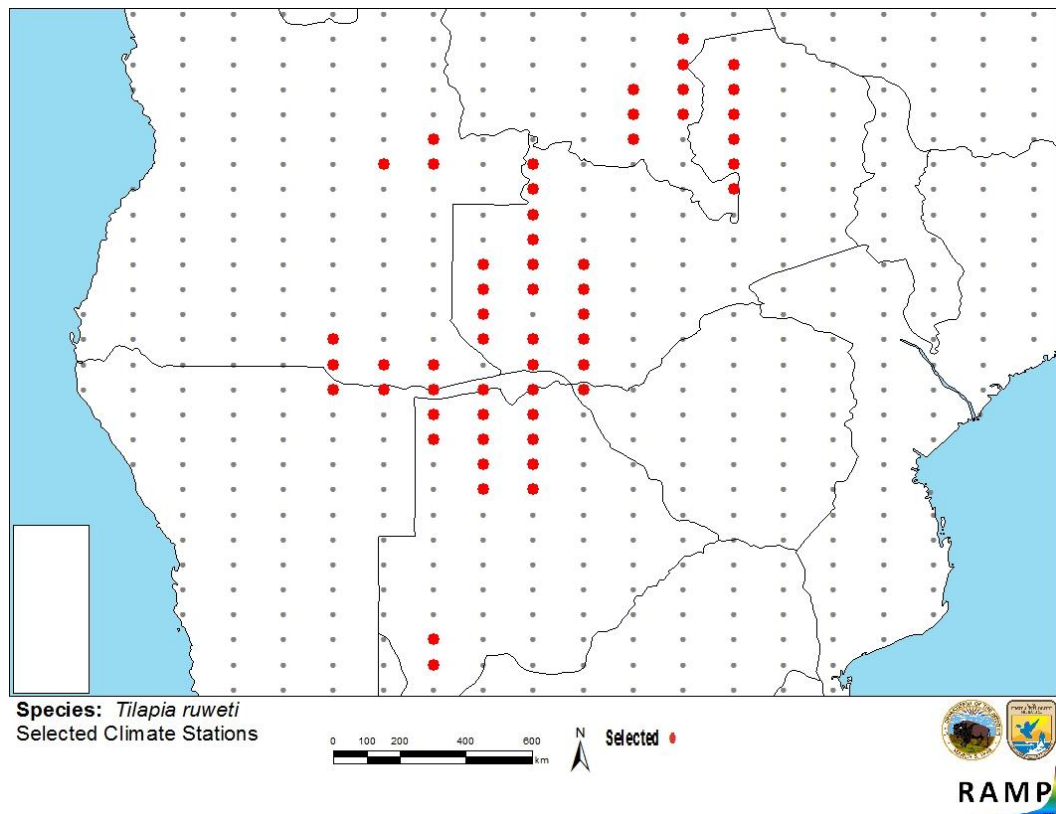


Figure 2. RAMP (Sanders et al. 2014) source map showing weather stations selected as source locations (red) and non-source locations (gray) for *T. ruweti* climate matching. Source locations from GBIF (2015).

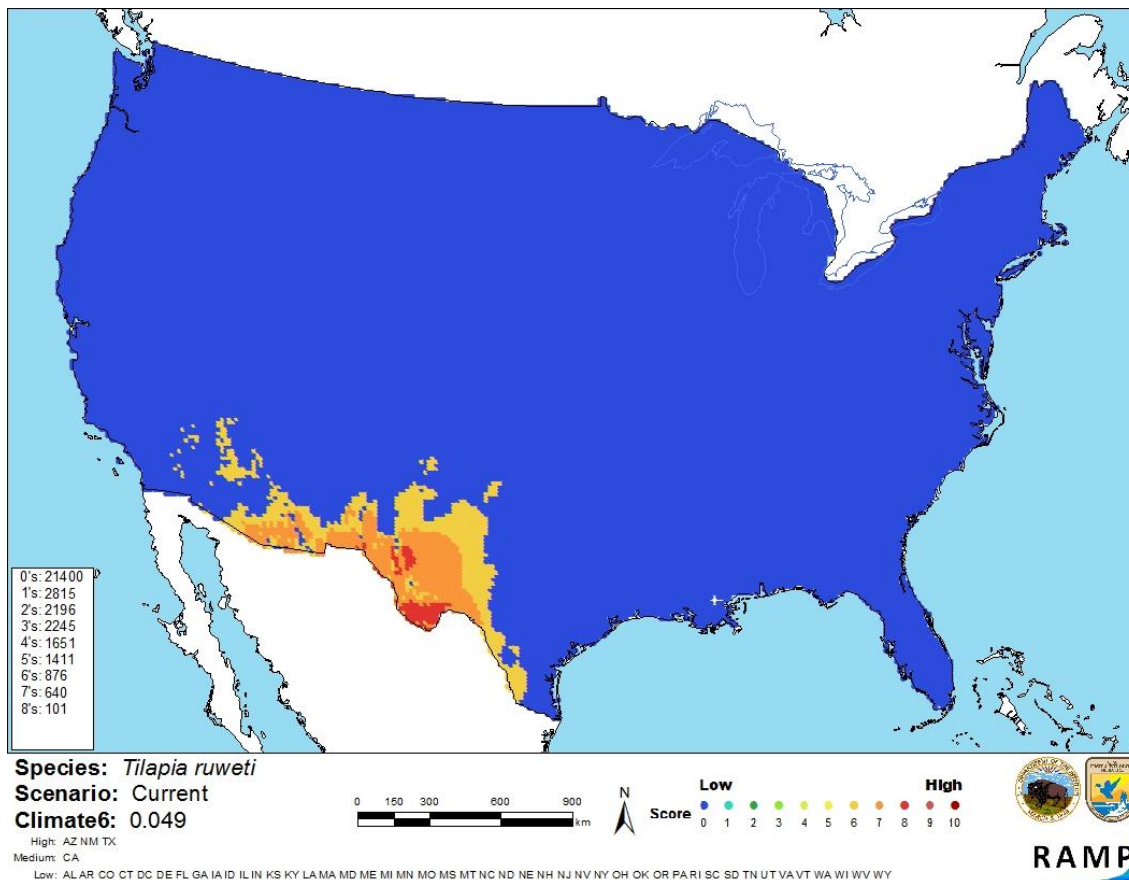


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *T. ruweti* in the continental United States based on source locations reported by GBIF (2015). 0= Lowest match, 10=Highest match. Counts of climate match scores are tabulated on the left.

7 Certainty of Assessment

Some information on the biology of *T. ruweti* is available because of its use in the aquarium trade, but little scientific literature exists on this species. It has never become established outside its native range. The certainty of this assessment is high because the lack of information about the species and potential impacts of its introduction precludes any assessment other than “uncertain” risk.

8 Risk Assessment

Summary of Risk to the Continental United States

T. ruweti is a benthopelagic fish native to south-central Africa. It is used in the aquarium trade but no populations of the species have become established outside its native range. *T. ruweti* has a medium climate match in the continental United States. Because *T. cabrae* has no history of invasiveness, it is currently impossible to know what impacts *T. cabrae* might have if introduced to the US. Overall risk of this species is uncertain.

Assessment Elements

- **History of Invasiveness:** Uncertain
- **Climate Match:** Low
- **Certainty of Assessment:** High
- **Overall Risk Assessment Category:** Uncertain

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9 References

Note: The following references were accessed for this ERSS. References cited within quoted text but not accessed are included below in Section 10.

Froese, R., and D. Pauly, editors. 2012. *Tilapia ruweti* (Poll & Thys van den Audenaerde, 1965). FishBase. Available: <http://www.fishbase.org/summary/8930>. (May 2012, June 2015).

Global Biodiversity Information Facility (GBIF). GBIF backbone taxonomy: *Tilapia ruweti* (Poll & Thys van den Audenaerde, 1965). Global Biodiversity Information Facility, Copenhagen. Available: <http://www.gbif.org/species/2370677>. (June 2015).

Integrated Taxonomic Information System (ITIS). 2012. *Tilapia ruweti* (Poll and Thys van den Audenaerde, 1965). Integrated Taxonomic Information System, Reston, Virginia. Available: http://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=648981. (May 2012).

Sanders, S., C. Castiglione, and M. Hoff. 2014. Risk Assessment Mapping Program: RAMP. U.S. Fish and Wildlife Service.

10 References Quoted But Not Accessed

Note: The following references are cited within quoted text within this ERSS, but were not accessed for its preparation. They are included here to provide the reader with more information.

Bell-Cross, G., and J. L. Minshull. 1988. The fishes of Zimbabwe. National Museums and Monuments of Zimbabwe, Harare, Zimbabwe.

Poll, M., and D. Thys van den Audenaerde. 1965. Deux Cichlidae nouveaux du sud du bassin du Congo. *Revue de Zoologie et de Botanique Africaines* 72(3-4):322-333.

Skelton, P. H. 1993. A complete guide to the freshwater fishes of southern Africa. Southern Book Publishers, Halfway House, South Africa.

Teugels, G. G., and D. F. E. Thys van den Audenaerde. 1991. Tilapia. Pages 482-508 in J. Daget, J.-P. Gosse, G. G. Teugels, and D. F. E. Thys van den Audenaerde, editors. Check-list of the freshwater fishes of Africa (CLOFFA), volume 4. ISNB, Brussels; MRAC, Tervuren; and ORSTOM, Paris.